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TROPIS: Tree Growth and Permanent Plot Information System

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Several recent reviews report a paucity of long-term studies in terrestrial ecology (e.g., Strayer *et al*., 1986; Tilman, 1989); this presumably relates more to the availability of data from long term permanent plots, rather than the existence of such studies. TROPIS attempts to redress this situation by drawing attention to existing studies. TROPIS is the acronym for the Tree Growth and Permanent Plot Information System sponsored by CIFOR to promote more effective use of existing data and knowledge about tree growth in both planted and natural forests throughout the world. It has five components:

1. a network of people willing to share permanent plot data and tree growth information;
2. an index (metadatabase) of people and institutions with permanent plots;
3. a database management system to promote more efficient handling of data;
4. site-matching software to facilitate use of supplementary data from comparable sites; and
5. an inference system to allow growth estimates to be made in the absence of empirical data.

Since TROPIS is largely about people, the clients and contributors are kept up-to-date with *TROPIS-Update*, a twice-a-year information sheet informing of recent developments and progress. At present, *TROPIS-Update* goes to about 200 people by email, and to a further 200 by regular mail. Others are also welcome to subscribe, and may do so by sending an email to listserv@cgnet.com with the message "subscribe tropis" or by contacting the author. TROPIS also provides information via the internet, at http://www.cgiar.org/cifor/research/tropis.html. In addition to the latest information on

TROPIS, this site offers advice on how to contribute and how to search TROPIS, and offers hypertext links to other sources of long-term permanent plot data.

The core of TROPIS is the index of people and their plots, maintained in a relational database. The database is essentially hierarchical: the key element of the database is the informant. Each informant may contribute information on many plot series, each of which has consistent objectives. In turn, each series may comprise many plots, each of which may have a different location, a different size, etc. And each plot may contain many species. A series may be a thinning or spacing experiment, some species or provenance trials, a continuous forest inventory system, or any other aggregation of plots convenient to the informant. Plots need not be current, and discontinued or abandoned plots may be included provided that the location is known and the plot data remain accessible. TROPIS currently contains references to over 10,000 plots with over 2,000 species in all parts of the world. Over 60% of these entries deal with natural forests.

At present, searches are possible only via mail, fax or email requests to the TROPIS-coordinator at CIFOR, but it is anticipated that self-service on-line searching will be made available soon (assisted searches will continue for those without Internet access). Clients may search for plots with specified taxa, locations (latitude/longitude or place name), silvicultural treatment, or other specified criteria and combinations. The main outcome of such searches is a list of people to contact, with details of the nature and amount of relevant data held. Anyone with permanent plots is urged to contribute to the TROPIS system, provided that they agree in principle to share their data with others, subject of course, to a mutually satisfactory agreement between the data owner and the intending user.

References

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Tilman, D., 1989. Ecological experiments: strengths and conceptual problems. *In* G.E. Likens (ed.) *Long-term Studies in Ecology: Approaches and alternatives*. Springer NY, pp. 136-157.